

Remarks/Arguments

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-27 pending in the application, with Claims 1-3, 5, 6, 8-15, 18, and 21 amended by the present amendment.

In the outstanding Office Action, Claims 5-8, 13-14, 17-18, 20, and 22-27 were withdrawn from consideration, the abstract and drawings were objected to; Claims 1, 11, and 21 were objected to; Claims 2-3, 10, and 15 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pidgeon. (U.S. Patent No. 5,153,763); and Claims 9-12, 15-16, 19, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wright (U.S. Patent No. 5,841,468) in view of Pidgeon.

The specification, abstract, Figure 5, and Claims 1-3, 5, 6, 8-15, 18, and 21 are amended to correct the informalities noted in the Official Action and to more clearly describe and distinctly claim Applicants' invention. No new matter is added.

Regarding Claims 5-8, 13-14, 17-18, 20, and 22-27, Applicants submit that each of these Claims depend from one of already examined Claims 1-3, 10-11, 15, and 21. Therefore, Applicants submit it would not be a serious burden to examine dependent Claims 5-8, 13-14, 17-18, 20, and 22-27 and respectfully request these withdrawn claims be reinstated for examination.

Briefly recapitulating, amended Claim 1 is directed to an optical apparatus, comprising: an input optical path (170) carrying an input light beam modulated by an input carrier signal modulated by an information signal, the input carrier signal having a radio frequency; and an output optical path (215) carrying an output light beam modulated by an

output carrier signal modulated by the same information signal as the input carrier signal, the output carrier signal having a higher radio frequency than the input carrier signal. The optical apparatus also includes an optical upconverter means (180) for converting the input light beam into the output light beam. The optical converter means connects the input optical path (170) to said output optical path (215). With the optical upconverter, signals from multiple consumer nodes may be sent to a common head node with reduced distortion and improved performance.¹

Pidgeon discloses an optical CATV system configured to distribute cable TV signals from a head node to a plurality of consumer nodes. Pidgeon also discloses a distortion reduction system which has components placed on either end of a fiber cable.² Applicants first note that Pidgeon provides no feedback from the consumer nodes to the head node as disclosed in Applicants' specification. Furthermore, contrary to the Official Action, the distortion system of Pidgeon is not an optical upconverter at least because the distortion system of Pidgeon converts *RF-to-optical-to-RF*. An optical upconverter converts *optical-to-RF-to-optical*, where the frequency of the carrier signals associated with the optical signal output from the optical converter is higher than the frequency of the carrier signals associated with the optical signal input to the optical converter.³ Applicants have also considered the Wright reference and submit that Wright does not cure the deficiencies of Pidgeon. Therefore, Applicants submit the inventions defined by Claim 1, and all claims depending therefrom, are not rendered obvious by the asserted prior art for at least the reasons stated above.⁴ For similar reasons, Applicants submit the inventions recited in independent Claims

¹ Specification, page 25, line 26 – page 26, line 6.

² Pidgeon, column 4, lines 1-3 and Figures 2-3.

³ Specification, page 25, lines 3-25 and page 26, lines 7-18.

⁴ MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of

6, 8, and 19, and all claims depending therefrom, are also not rendered obvious by the asserted prior art

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."